



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/808,326

03/25/2004

Shioupyn Shen

0026-0072

5423

44989

7590

08/22/2007

HARRITY SNYDER, LLP  
11350 Random Hills Road  
SUITE 600  
FAIRFAX, VA 22030

EXAMINER

SMITH, GARRETT A

ART UNIT

PAPER NUMBER

2169

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/808,326

Applicant(s)

SHEN, SHIOUPYN

Examiner

Garrett A. Smith

Art Unit

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-34 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :28 July 2004, 24 June 2005, 16 November 2005 and 31 July 2007.

### **DETAILED ACTION**

1. This Office action is regarding the Application filed 25 March 2004. Claims 1 – 34 are pending.

#### ***Information Disclosure Statement***

2. The Examiner has considered the Information Disclosure Statements (IDS) filed on 28 July 2004, 24 June 2005, 16 November 2005 and 31 July 2007.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 20 – 34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. In regard to claim 20, the Specification (§48) provides evidence that Applicant intends the “fingerprint creation module” and the “similarity detection component” to be implemented in software. The “search engine” of dependant claim 21 is also intended to be implemented in software.

6. In regard to claim 26, the Specification (§48) provides evidence that Applicant intends the “means for sampling ...”, “means for choosing ...” and “means for compacting ...” to be implemented in software. The “means for calculating ...” of dependant claim 27 is also intended to be implemented in software.

7. In regard to claim 34, the Specification (§48) provides evidence that Applicant intends the “means for sampling ...”, “means for calculating ...”, “means for choosing ...” and “means for setting ...” to be implemented in software.

8. Therefore, claims 20 – 30 and 34 are directed towards software, *per se*. The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*. Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994). Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

9. In regard to claims 31 – 33, these claims fail to place the invention squarely within one statutory class of invention. On page 7, ¶28 of the instant specification, applicant has provided evidence that applicant intends the “computer readable medium” to include signals and carrier waves. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore these claims are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

***Claim Rejections - 35 USC § 102(a)***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claims 1, 2, 5, 6, 8, 11, 13, 16, 17, 20, 24, 26, 27 and 28 are rejected under 35 U.S.C. 102(a) as being anticipated by Schleimer et al (“Winnowing: Local Algorithms for Document Fingerprinting”; published 9 June 2003).

12. In regard to claim 1, Schleimer et al discloses sampling the document to obtain a plurality of overlapping blocks (Section 3: Winnowing; windows can be overlapping sample of a document); choosing a subset of the sampled blocks (Section 3: Winnowing; figure 2(e) shows a set of predetermined size of elements are selected into windows); and compacting the subset of the sampled blocks to obtain the

representation of the document (figure 2(e) shows the compaction by winnowing, so does Section 3).

13. In regard to claim 2, Schleimer et al discloses compacting the subset of the sampled blocks includes setting bits in the representation of the document based on the subset of the sampled blocks ((g) of Figure 2, bits of the representation of the document i.e. document signature are set).

14. In regard to claim 5, Schleimer et al discloses hashing the sampled blocks (figure 2(d)).

15. In regard to claim 6, Schleimer et al discloses choosing the smallest hash value in a window (Section 3).

16. In regard to claim 8, Schleimer et al discloses hashing the sampled blocks (figure 2(d)).

17. In regard to claim 11, Schleimer et al discloses the overlapping blocks can be of the same length (Section 3).

18. In regard to claim 13, Schleimer et al discloses sampling the document to obtain a plurality of overlapping blocks (Section 3: Winnowing; windows can be overlapping sample of a document); choosing a subset of the sampled blocks (Section 3: Winnowing; figure 2(e) shows a set of predetermined size of elements are selected into windows); and compacting the subset of the sampled blocks to obtain the representation of the document (figure 2(e) shows the compaction by winnowing, so does Section 3).

19. In regard to claim 16, Schleimer et al discloses hashing the sampled blocks (figure 2(d)) and choosing the smallest hash value in a window (Section 3).

20. In regard to claim 17, Schleimer et al discloses hashing the sampled blocks (figure 2(d)).

21. In regard to claim 20, Schleimer et al discloses sampling the document to obtain a plurality of overlapping blocks (Section 3: Winnowing; windows can be overlapping sample of a document); choosing a subset of the sampled blocks (Section 3: Winnowing; figure 2(e) shows a set of predetermined size of elements are selected into windows); and compacting the subset of the sampled blocks to obtain the representation of the document (figure 2(e) shows the compaction by winnowing, so does Section 3). Schleimer et al further discloses comparing the document representation against a query based on the representation of another document (Section 3.2).

22. In regard to claim 24, Schleimer et al discloses choosing the smallest hash value in a window (Section 3).

23. In regard to claim 26, Schleimer et al discloses sampling the document to obtain a plurality of overlapping blocks (Section 3: Winnowing; windows can be overlapping sample of a document); choosing a subset of the sampled blocks (Section 3: Winnowing; figure 2(e) shows a set of predetermined size of elements are selected into windows); and compacting the subset of the sampled blocks to obtain the representation of the document (figure 2(e) shows the compaction by winnowing, so does Section 3).



Art Unit: 2169

24. In regard to claim 27, Schleimer et al discloses hashing the sampled blocks (figure 2(d)).

25. In regard to claim 28, Schleimer et al discloses choosing the smallest hash value in a window (Section 3).

***Claim Rejections - 35 USC § 102(b)***

26. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

27. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Burrows (US Patent 5,745,900 B1; patented 28 April 1998).

28. In regard to claim 20, Burrows discloses a fingerprint creation unit (2410) that samples the document to obtain a plurality of blocks (see figure 4, blocks are selected from a document); chooses a subset of the sampled blocks (see figure 4, blocks are selected from a document); and compacting the subset of the sampled blocks to obtain the representation of the document (Figure 5 shows the resultant compaction of the results of the selected sampled blocks). Burrows further discloses a similarity detection component to compare fingerprints to determine whether pairs of fingerprints correspond to near-duplicate documents (2420 and see figure 24).

***Claim Rejections - 35 USC § 103***

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. Claims 1 – 2 and 5 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PGPUB 2002/0133499 A1; published 19 September 2002).

31. In regard to claim 1, Burrows teaches sampling the document to obtain a plurality of blocks (see figure 4, blocks are selected from a document); choosing a subset of the sampled blocks (see figure 4, blocks are selected from a document); and compacting the subset of the sampled blocks to obtain the representation of the document (Figure 5 shows the resultant compaction of the results of the selected sampled blocks). Burrows does not explicitly teach that the blocks can be overlap data. However, Ward et al teaches a sliding window of overlap for data (see ¶132). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

32. In regard to claim 2, Burrows teaches setting bits in the representation of the document based on the subset of the sampled blocks (Figure 5 shows the resultant compaction of the results of the selected sampled blocks; since the representation is stored in memory or on a disk, bits are set based on the sampled blocks). It would have

been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

33. In regard to claim 5, Ward et al teaches hashing of the data blocks (see ¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

34. In regard to claim 6, Ward et al teaches choosing the highest weighted feature of the computed vectors. Another obvious choice inferred from Ward et al is the lowest weighted feature can be chosen (¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

35. In regard to claim 7, Ward et al teaches choosing the highest weighted feature of the computed vectors (¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

36. In regard to claim 8, Ward et al teaches hashing of the data blocks (see ¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

37. Claims 3, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows and Ward et al as applied to claim 1 above, and further in view of Broder et al (US Patent 6,230,155 B1; patented 8 May 2001).

38. In regard to claim 3, Burrows and Ward et al teach the invention as substantially claimed. Burrows and Ward et al do not explicitly teach that the representation of the document be of a predetermined length. However, Broder et al does teach that a predetermined length of the representation of a document (see col 5, lines 1 – 14). It would have been obvious to a person of ordinary skill in the art at the time of invention to use the predetermined length of representation of a document of Broder et al with the method of Burrows and Ward et al because it allows for easy comparison of the fingerprints between two documents.

39. In regard to claim 4, Burrows and Ward et al teach the invention as substantially claimed. However, Broder et al does teach that a predetermined length of the representation of a document (see col 5, lines 1 – 14) and suggests that a longer fingerprint reduces the chance of two documents that are not similar that have exactly the same fingerprint (see col 5, lines 1 – 14). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to use the predetermined length of representation of a document of Broder et al with the method of Burrows and Ward et al because it allows for easy comparison of the fingerprints between two documents as well as reduce the chance of two documents that are not similar that have exactly the same fingerprint.

Art Unit: 2169

40. In regard to claim 11, Burrows and Ward et al teach the invention as substantially claimed. However, Broder et al teaches that “words” can be of a predetermined size such as 8 bytes (see col 6, lines 4 – 7). It would have been obvious to a person of ordinary skill in the art at the time of invention to use the predetermined length of representation of a document of Broder et al with the method of Burrows and Ward et al because it allows for easy comparison of the fingerprints between two documents as well as reduce the chance of two documents that are not similar that have exactly the same fingerprint.

41. In regard to claim 12, Burrows and Ward et al teach the invention as substantially claimed. However, Broder et al teaches that “words” can be of a predetermined size such as 8 bytes (see col 6, lines 4 – 7) and under sized words can be padded to bring them to correct size. It would have been obvious to a person of ordinary skill in the art at the time of invention to use the predetermined length of representation of a document of Broder et al with the method of Burrows and Ward et al because it allows for easy comparison of the fingerprints between two documents as well as reduce the chance of two documents that are not similar that have exactly the same fingerprint.

42. Claims 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PGPUB 2002/0133499 A1; published 19 September 2002).

43. In regard to claim 13, Burrows teaches sampling the document to obtain a plurality of blocks (see figure 4, blocks are selected from a document); choosing a

subset of the sampled blocks (see figure 4, blocks are selected from a document); setting bits in the representation of the document based on the subset of the sampled blocks (Figure 5 shows the resultant compaction of the results of the selected sampled blocks; since the representation is stored in memory or on a disk, bits are set based on the sampled blocks). Burrows does not explicitly teach that the blocks can be overlap data. However, Ward et al teaches a sliding window of overlap for data (see ¶32). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

44. In regard to claim 16, Ward et al teaches hashing of the data blocks (see ¶40). Ward et al also teaches choosing the highest weighted feature of the computed vectors. Another obvious choice inferred from Ward et al is the lowest weighted feature can be chosen (¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

45. In regard to claim 17, Ward et al teaches hashing of the data blocks (see ¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

46. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows and Ward et al as applied to claim 13 above, and further in view of Broder et al (US Patent 6,230,155 B1; patented 8 May 2001).

47. In regard to claim 14, Burrows and Ward et al teach the invention as substantially claimed. Burrows and Ward et al do not explicitly teach that the representation of the document be of a predetermined length. However, Broder et al does teach that a predetermined length of the representation of a document (see col 5, lines 1 – 14). It would have been obvious to a person of ordinary skill in the art at the time of invention to use the predetermined length of representation of a document of Broder et al with the method of Burrows and Ward et al because it allows for easy comparison of the fingerprints between two documents.

48. In regard to claim 15, Burrows and Ward et al teach the invention as substantially claimed. However, Broder et al does teach that a predetermined length of the representation of a document (see col 5, lines 1 – 14) and suggests that a longer fingerprint reduces the chance of two documents that are not similar that have exactly the same fingerprint (see col 5, lines 1 – 14). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to use the predetermined length of representation of a document of Broder et al with the method of Burrows and Ward et al because it allows for easy comparison of the fingerprints between two documents as well as reduce the chance of two documents that are not similar that have exactly the same fingerprint.

Art Unit: 2169

49. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows as applied to claim 20 above, and further in view of Charikar ("Similarity Estimation Techniques from Rounding Algorithms"; published 19 May 2002).

50. In regard to claim 22, Burrows teaches the invention as substantially claimed. Burrows does not explicitly state the use of Hamming Space for the comparison of fingerprints. However, Charikar does teach use of Hamming space for calculating the similarity between fingerprints (see page 382, col 2, second paragraph). It would have been obvious to a person ordinary skill in the art at the time of invention to use the Hamming space calculations of Charikar with the components of Burrows because it is an able and suggested method for computing nearest neighbor problems and similarity tests.

51. In regard to claim 23, Burrows teaches the invention as substantially claimed. Burrows does not explicitly state the use of Hamming Space for the comparison of fingerprints. However, Charikar does teach use of Hamming space for calculating the similarity between fingerprints (see page 382, col 2, second paragraph). It would have been obvious to a person ordinary skill in the art at the time of invention to use the Hamming space calculations of Charikar with the components of Burrows because it is an able and suggested method for computing nearest neighbor problems and similarity tests.

52. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) as applied to claim 20



above, and further in view of Ward et al (US PG PUB 2002/0133499 A1; published 19 September 2002).

53. In regard to claim 24, Burrows teaches the invention as substantially claimed. Ward et al teaches choosing the highest weighted feature of the computed vectors. Another obvious choice inferred from Ward et al is the lowest weighted feature can be chosen (§40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

54. In regard to claim 25, Burrows teaches the invention as substantially claimed. Ward et al teaches choosing the highest weighted feature of the computed vectors (§40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

55. Claims 26 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PG PUB 2002/0133499 A1; published 19 September 2002).

56. In regard to claim 26, Burrows teaches sampling the document to obtain a plurality of blocks (see figure 4, blocks are selected from a document); choosing a subset of the sampled blocks (see figure 4, blocks are selected from a document); and compacting the subset of the sampled blocks to obtain the representation of the document (Figure 5 shows the resultant compaction of the results of the selected

sampled blocks). Burrows does not explicitly teach that the blocks can be overlap data. However, Ward et al teaches a sliding window of overlap for data (see ¶32). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

57. In regard to claim 27, Burrows teaches the invention as substantially claimed. Ward et al teaches hashing of the data blocks (see ¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

58. In regard to claim 28, Burrows teaches the invention as substantially claimed. Ward et al teaches choosing the highest weighted feature of the computed vectors. Another obvious choice inferred from Ward et al is the lowest weighted feature can be chosen (¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

59. In regard to claim 29, Burrows teaches the invention as substantially claimed. Ward et al teaches choosing the highest weighted feature of the computed vectors (¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

Art Unit: 2169

60. Claims 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PG PUB 2002/0133499 A1; published 19 September 2002).

61. In regard to claim 31, Burrows teaches sampling the document to obtain a plurality of blocks (see figure 4, blocks are selected from a document); choosing a subset of the sampled blocks (see figure 4, blocks are selected from a document); setting bits in the representation of the document based on the subset of the sampled blocks (Figure 5 shows the resultant compaction of the results of the selected sampled blocks; since the representation is stored in memory or on a disk, bits are set based on the sampled blocks). Burrows does not explicitly teach that the blocks can be overlap data. However, Ward et al teaches a sliding window of overlap for data (see ¶32). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

62. In regard to claim 32, Ward et al teaches hashing of the data blocks (see ¶40). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

63. In regard to claim 34, Burrows teaches sampling the document to obtain a plurality of blocks (see figure 4, blocks are selected from a document); choosing a subset of the sampled blocks (see figure 4, blocks are selected from a document); setting bits in the representation of the document based on the subset of the sampled

blocks (Figure 5 shows the resultant compaction of the results of the selected sampled blocks; since the representation is stored in memory or on a disk, bits are set based on the sampled blocks). Burrows does not explicitly teach that the blocks can be overlap data. However, Ward et al teaches a sliding window of overlap for data (see ¶32). It would have been obvious to a person of ordinary skill in the art to use the window overlapping sampling of Ward et al with the method of Burrows because it allows for quicker indexing a higher accuracy of the resulting samples.

64. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PGPUB 2002/0133499 A1; published 19 September 2002) as applied to claim 8 above, and further in view of Official Notice.

65. In regard to claim 9, Burrows and Ward et al teach the invention as substantially claimed. The Examiner takes Official Notice that taking a number of least significant bits is well known by a person of ordinary skill in the art at the time of invention. It would have been obvious to a person of ordinary skill in the art at the time of invention to use this type of hashing technique in the method of Burrows and Ward et al because it is allows a convenient low overhead method a determining which bin a particular sample gets placed into.

66. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PGPUB

Art Unit: 2169

2002/0133499 A1; published 19 September 2002) as applied to claim 8 above, and further in view of Official Notice.

In regard to claim 18, Burrows and Ward et al teach the invention as substantially claimed. The Examiner takes Official Notice that taking a number of least significant bits is well known by a person of ordinary skill in the art at the time of invention. It would have been obvious to a person of ordinary skill in the art at the time of invention to use this type of hashing technique in the method of Burrows and Ward et al because it is allows a convenient low overhead method a determining which bin a particular sample gets placed into.

67. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) in view of Ward et al (US PGPUB 2002/0133499 A1; published 19 September 2002) as applied to claim 8 above, and further in view of Official Notice.

In regard to claim 33, Burrows and Ward et al teach the invention as substantially claimed. The Examiner takes Official Notice that taking a number of least significant bits is well known by a person of ordinary skill in the art at the time of invention. It would have been obvious to a person of ordinary skill in the art at the time of invention to use this type of hashing technique in the method of Burrows and Ward et al because it is allows a convenient low overhead method a determining which bin a particular sample gets placed into.

Art Unit: 2169

68. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US Patent 5,745,900 B1; patented 28 April 1998) as applied to claim 20 above, and further in view of Official Notice.

69. In regard to claim 21, Burrows also discloses a search engine (140, see figure 1). However, Burrows does not explicitly disclose returning a single link when the documents are determined to be duplicates. The Examiner takes Office Notice that returning a single link when the documents are determined to be duplicates is well known by a person of ordinary skill in the art at the time of invention. It would have been obvious to a person of ordinary skill in the art at the time of invention to use returning a single link with the components of Burrows because it would reduce the amount of data traffic and provide the user with clarity as to the nature of the document.

***Allowable Subject Matter***

70. Claims 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

71. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 5845005 A; US 6393438 B1; US 20030105716 A1.

72. The Examiner requests, in response to this Office action, that support be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line no(s) in the specification and/or drawing figure(s). This will assist the Examiner in prosecuting the application.

73. When responding to this Office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Garrett A. Smith whose telephone number is (571) 270-1764.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chace can be reached on (571) 272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2169

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 14, 2007



Garrett Smith  
Patent Examiner  
Art Unit 2169



CHRISTIAN CHACE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100